South Coast
Air Quality Management District
21865 Copley Drive, Diamond Bar, CA 91765-4178
(909) 396-2000 • www.aqmd.gov

December 10, 2008

Uve Sillat
Environmental Engineer
Southern California Edison
P.O. Box 800
Rosemead, CA 90704

SUBJECT: Barre Turbine and Emergency Engine modification (ID# 51475)

Dear Mr. *Sillat*:

The enclosed revised Title V Facility Permit for equipment located at 8662 Cerritos Ave., Stanton, CA 90680, reflects the requested modifications to the gas turbine and emergency engine. The equipment and revised conditions are included in Section H of the permit. The corresponding application numbers are summarized in the table below:

| Application | Description | Device ID# |
|---|---|---|
| 478609 | Gas turbine | D1 |
| 479360 | Emergency IC engine | D6 |
| 478610 | Title V | NA |

In accordance with Rule 3005(e), AQMD sent the proposed permit to EPA on October 1, 2008 for the 45 day review and comment period. EPA notified AQMD on November 7, 2008 that they had no comments on the proposed permit.

Please review the revised permit carefully. Insert the enclosed sections into your Facility Permit and discard the earlier versions. Questions concerning changes to your permit should be directed to Mr. Marcel Saulis at (909) 396-3093.

Sincerely,

Michael D. Mills

Michael D. Mills
Senior Manager
General Commercial and Energy Team
Engineering and Compliance

attachment
cc: Gerardo Rios, EPA (with attachment)
Melesio Hernandez, SCAQMD Compliance
Energy Unit files

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT
21865 Copley Drive, Diamond Bar, CA 91765

Title Page
Facility I.D.#: 051475
Revision #: 1
Date: December 10, 2008

# FACILITY PERMIT TO OPERATE

**SO CAL EDISON CO**
**8662 CERRITOS AVE**
**STANTON, CA 90680**

## NOTICE

IN ACCORDANCE WITH RULE 206, THIS PERMIT TO OPERATE OR A COPY THEREOF MUST BE KEPT AT THE LOCATION FOR WHICH IT IS ISSUED.

THIS PERMIT DOES NOT AUTHORIZE THE EMISSION OF AIR CONTAMINANTS IN EXCESS OF THOSE ALLOWED BY DIVISION 26 OF THE HEALTH AND SAFETY CODE OF THE STATE OF CALIFORNIA OR THE RULES OF THE SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT. THIS PERMIT SHALL NOT BE CONSTRUED AS PERMISSION TO VIOLATE EXISTING LAWS, ORDINANCES, REGULATIONS OR STATUTES OF ANY OTHER FEDERAL, STATE OR LOCAL GOVERNMENTAL AGENCIES.

Barry R. Wallerstein, D. Env.
EXECUTIVE OFFICER

By Mike Mills for
Mohsen Nazemi, P.E.
Deputy Executive Officer
Engineering & Compliance

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## TABLE OF CONTENTS

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|---|---|---|---|---|---|
| **Process 1 : POWER GENERATION** | | | | | |
| **System 1 : GAS TURBINE** | | | | | |
| GAS TURBINE, PEAKING UNIT, UNIT NO. 1, NATURAL GAS, GENERAL ELECTRIC, MODEL LM6000PC SPRINT, SIMPLE CYCLE, HEAT INPUT REFERENCED AT 88 DEGREES FAHRENHEIT, WITH WATER INJECTION, 522 MMBTU/HR WITH A/N: 478609<br>Permit to Construct Issued: 12/10/08 | D1 | C3 C4 S5 | | **CO:** 2000 PPMV (5) [**RULE 407,4-2-1982**] ; **CO:** 6 PPMV NATURAL GAS (4) [**RULE 1303(a)(1)-BACT,5-10-1996;*RULE 1303(a)(1)-BACT,12-6-2002***] | A63.1, A63.2, A63.3, A63.4, A63.5, A99.1, A99.2, A195.1, A195.2, A195.3, A327.1, C1.1, C1.2, |
| | | | | **NOX:** 25 PPMV NATURAL GAS (8) [**40CFR 60 Subpart KKKK,7-6-2006**] ; **NOX:** 2.5 PPMV NATURAL GAS (4) [**RULE 1303(a)(1)-BACT,5-10-1996** *RULE 1303(a)(1)-BACT,12-6-2002*] ; **PM:** 0.1 GRAINS/SCF (5) [**RULE 409,8-7-1981**] ; **PM:** 11 LBS/HR (5A) [**RULE 475,10-8-1976** *RULE 475,8-7-1978*] ; **PM:** 0.01 GRAINS/SCF (5B) [**RULE 475,10-8-1976;*RULE 475,8-7-1978***] ; **SO2:** (9) [**40CFR 72 - Acid Rain Provisions,11-24-1997**] | C1.3, D12.1, D29.1, D29.2, D29.3, D82.1, E193.1, H23.1, K40.1, K67.1 |

* (1)(1A)(1B) Denotes RECLAIM emission factor
(2)(2A)(2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit
(4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit
(6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit
(8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS,etc.)
(9) See App B for Emission Limits
(10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|---|---|---|---|---|---|
| **Process 1 : POWER GENERATION** | | | | | |
| GENERATOR, 49 MW | | | | **SOX:** 0.06 LBS/MMBTU (8) **[40CFR 60 Subpart KKKK,7-6-2006]** ; **VOC:** 2 PPMV NATURAL GAS (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** ***RULE 1303(a)(1)-BACT,12-6-2002*** **]** | |
| CO OXIDATION CATALYST, BASF, 80 CUBIC FEET OF TOTAL CATALYST VOLUME<br>A/N: 462015<br>Permit to Construct Issued: 04/03/07 | C3 | D1 | | | E193.1 |
| SELECTIVE CATALYTIC REDUCTION, CORMETECH CMHT-21, WITH 547 CUBIC FEET OF TOTAL CATALYST VOLUME, WIDTH: 18 FT; HEIGHT: 25 FT 9 IN; LENGTH: 2 FT 6 IN WITH<br>A/N: 462015<br>Permit to Construct Issued: 04/03/07<br>AMMONIA INJECTION | C4 | D1 | | **NH3:** 5 PPMV (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** ***RULE 1303(a)(1)-BACT,12-6-2002*** **]** | A195.4, D12.2, D12.3, D12.4, E179.1, E179.2, E193.1 |
| STACK, HEIGHT: 80 FT; DIAMETER: 13 FT<br>A/N: 478609<br>Permit to Construct Issued: 12/10/08 | S5 | D1 | | | |

* (1)(1A)(1B) Denotes RECLAIM emission factor
(2)(2A)(2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit
(4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit
(6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit
(8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS,etc.)
(9) See App B for Emission Limits
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** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

| Equipment | ID No. | Connected To | RECLAIM Source Type/ Monitoring Unit | Emissions * And Requirements | Conditions |
|---|---|---|---|---|---|
| **Process 1 : POWER GENERATION** | | | | | |
| **System 2 : EMERGENCY IC ENGINE** | | | | | |
| INTERNAL COMBUSTION ENGINE, EMERGENCY POWER, NATURAL GAS, WAUKESHA, MODEL VGF36 GL/GLD, WITH TURBOCHARGER, 924 BHP<br>A/N: 479360<br>Permit to Construct Issued: 12/10/08 | D6 | | | **CO:** 224 PPMV (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** *RULE 1303(a)(1)-BACT,12-6-2002*] ; **NOX:** 107 PPMV (4) **[RULE 1303(a)(1)-BACT,5-10-1996** *RULE 1303(a)(1)-BACT,12-6-2002*] ; **VOC:** 111 PPMV (4) **[RULE 1303(a)(1)-BACT,5-10-1996;** *RULE 1303(a)(1)-BACT,12-6-2002*] | A63.2, A63.3, A63.5, C1.4, D12.5, D29.4, E162.1, E193.1, E193.2, K67.2 |
| **System 3 : INORGANIC CHEMICAL STORAGE** | | | | | |
| STORAGE TANK, 19% AQUEOUS AMMONIA, HORIZONTAL, 10500 GALS<br>A/N: 462012<br>Permit to Construct Issued: 04/03/07 | D11 | | | | C157.1, E144.1, E193.1 |

* (1)(1A)(1B) Denotes RECLAIM emission factor
(2)(2A)(2B) Denotes RECLAIM emission rate
(3) Denotes RECLAIM concentration limit
(4) Denotes BACT emission limit
(5)(5A)(5B) Denotes command and control emission limit
(6) Denotes air toxic control rule limit
(7) Denotes NSR applicability limit
(8)(8A)(8B) Denotes 40 CFR limit(e.g. NSPS, NESHAPS,etc.)
(9) See App B for Emission Limits
(10) See Section J for NESHAP/MACT requirements

** Refer to Section F and G of this permit to determine the monitoring, recordkeeping and reporting requirements for this device.

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: DEVICE ID INDEX

**The following sub-section provides an index to the devices that make up the facility description sorted by device ID.**

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: DEVICE ID INDEX

| Device Index For Section H | | | |
|---|---|---|---|
| **Device ID** | **Section H Page No.** | **Process** | **System** |
| D1 | 1 | 1 | 1 |
| C3 | 2 | 1 | 1 |
| C4 | 2 | 1 | 1 |
| S5 | 2 | 1 | 1 |
| D6 | 3 | 1 | 2 |
| D11 | 3 | 1 | 3 |

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

## FACILITY CONDITIONS

F9.1 Except for open abrasive blasting operations, the operator shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is:

(a) As dark or darker in shade as that designated No.1 on the Ringelmann Chart, as published by the United States Bureau of Mines; or

(b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subparagraph (a) of this condition.

**[RULE 401, 3-2-1984**; RULE 401, 11-9-2001]

F14.1 The operator shall not use diesel fuel containing sulfur compounds in excess of 15 ppm by weight as supplied by the supplier.

[RULE 431.2, 9-15-2000]

F24.1 Accidental release prevention requirements of Section 112(r)(7):

a). The operator shall comply with the accidental release prevention requirements pursuant to 40 CFR Part 68 and shall submit to the Executive Officer, as a part of an annual compliance certification, a statement that certifies compliance with all of the requirements of 40 CFR Part 68, including the registration and submission of a risk management plan (RMP).

b). The operator shall submit any additional relevant information requested by the Executive Officer or designated agency.

**[40CFR 68 - Accidental Release Prevention, 5-24-1996]**

## DEVICE CONDITIONS

### A. Emission Limits

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A63.1 The operator shall limit emissions from this equipment as follows:

| CONTAMINANT | EMISSIONS LIMIT |
|---|---|
| NOX | Less than 1584 LBS IN ANY ONE MONTH |
| PM10 | Less than 1499 LBS IN ANY ONE MONTH |
| CO | Less than 2068 LBS IN ANY ONE MONTH |
| SOX | Less than 89 LBS IN ANY ONE MONTH |
| VOC | Less than 398 LBS IN ANY ONE MONTH |

The operator shall calculate the emission limit(s) by using fuel use data and the following emission factors: VOC: 2.95 lbs/mmcf, PM10: 10.63 lbs/mmcf, and SOx: 0.63 lbs/mmcf.

Compliance with the NOx and CO emission limits shall be verified through CEMS data. If CO CEMS data is not available, CO emissions shall be calculated using fuel usage and a factor of 14.12 lbs/mmcf during normal operations, 8.74 lbs/hr during any start up hour, and 7.86 lbs/hr during any shutdown hour. The operator shall use the appropriate missing data procedures if NOx data is not available.

If a CEMS calibration occurs within 60 minutes of a start up, NOx emissions for the calibration period shall be calculated using the actual duration of the calibration in minutes times a factor of 0.0802 lb/min, and shall only occur when NOx emissions are at or below BACT levels.

**[RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A63.2 The operator shall limit emissions from this equipment as follows:

| CONTAMINANT | EMISSIONS LIMIT |
|---|---|
| NOX | Less than 6783 LBS IN ANY ONE YEAR |
| PM10 | Less than 5454 LBS IN ANY ONE YEAR |
| CO | Less than 8885 LBS IN ANY ONE YEAR |
| SOX | Less than 324 LBS IN ANY ONE YEAR |
| VOC | Less than 1702 LBS IN ANY ONE YEAR |

The operator shall calculate the emission limit(s) by using fuel use data and the following emission factors for the turbine: During commissioning with no control- NOx: 245.71 lbs/mmcf; CO: 115.57 lbs/mmcf, VOC: 11.17 lbs/mmcf; PM10: 10.63 lbs/mmcf, and SOx: 0.63 lb/mmcf . During commissioning with water injection- NOx: 100.7 lbs/mmcf, all other factors remain the same. During normal operation- VOC: 3.07 lbs/mmcf, PM10: 10.63 lbs/mmcf, and SOx: 0.63 lbs/mmcf.

The operator shall calculate the annual emission limit(s) by using hourly operation data and the following emission factors for the engine: NOx: 2.55 lbs/hr, CO: 3.24 lbs/hr, VOC: 0.92 lbs/hr, PM10: 0.25 lbs/hr, SOx: 0.0038 lbs/hr.

Compliance with the NOx and CO emission limits shall be verified through CEMS data. If CO CEMS data is not available, CO emissions shall be calculated using fuel usage and a factor of 14.12 lbs/mmcf during normal operations, 8.74 lbs/hr during any start up hour, and 7.86 lbs/hr during any shutdown hour. The operator shall use the appropriate missing data procedures if NOx data is not available.

If a CEMS calibration occurs within 60 minutes of a start up, NOx emissions for the calibration period shall be calculated using the actual duration of the calibration in minutes times a factor of 0.0802 lb/min, and shall only occur when NOx emissions are at or below BACT levels.

For the purposes of this condition, the yearly emission limit shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12 month period beginning on the first day of each calendar month. The limits apply to the total emissions from the turbine plus the engine. THIS CONDITION APPLIES DURING THE 1ST 12 MONTHS OF OPERATION ONLY.

**[RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D6]

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A63.3 The operator shall limit emissions from this equipment as follows:

| CONTAMINANT | EMISSIONS LIMIT |
|---|---|
| NOX | Less than 6428 LBS IN ANY ONE YEAR |
| PM10 | Less than 5219 LBS IN ANY ONE YEAR |
| CO | Less than 7709 LBS IN ANY ONE YEAR |
| SOX | Less than 308 LBS IN ANY ONE YEAR |
| VOC | Less than 1525 LBS IN ANY ONE YEAR |

The operator shall calculate the emission limit(s) by using fuel use data and the following emission factors for the turbine: VOC: 2.95 lbs/mmcf, PM10: 10.63 lbs/mmcf, and SOx: 0.63 lbs/mmcf.

The operator shall calculate the emission limit(s) by using hourly operation data and the following emission factors for the engine: NOx: 2.55 lbs/hr, CO: 3.24 lbs/hr, VOC: 0.92 lbs/hr, PM10: 0.25 lbs/hr, SOx: 0.0038 lbs/hr.

Compliance with the NOx and CO emission limits shall be verified through CEMS data. If CO CEMS data is not available, CO emissions shall be calculated using fuel usage and a factor of 14.12 lbs/mmcf during normal operations, 8.74 lbs/hr during any start up hour, and 7.86 lbs/hr during any shutdown hour. The operator shall use the appropriate missing data procedures if NOx data is not available.

If a CEMS calibration occurs within 60 minutes of a start up, NOx emissions for the calibration period shall be calculated using the actual duration of the calibration in minutes times a factor of 0.0802 lb/min, and shall only occur when NOx emissions are at or below BACT levels.

For the purposes of this condition, the yearly emission limit shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12 month period beginning on the first day of each calendar month. The limits apply to the total emissions from the turbine plus the engine. THIS CONDITION APPLIES AFTER THE 1st 12 MONTHS OF OPERATION.

**[RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1, D6]

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A63.4 The operator shall limit emissions from this equipment as follows:

| CONTAMINANT | EMISSIONS LIMIT |
|---|---|
| NOX | Less than 2867 LBS IN ANY ONE MONTH |
| PM10 | Less than 1499 LBS IN ANY ONE MONTH |
| CO | Less than 3277 LBS IN ANY ONE MONTH |
| SOX | Less than 89 LBS IN ANY ONE MONTH |
| VOC | Less than 540 LBS IN ANY ONE MONTH |

The operator shall calculate the emission limit(s) ) by using fuel use data and the following emission factors: During commissioning with no control- NOx: 245.71 lbs/mmcf; CO: 115.57 lbs/mmcf, VOC: 11.17 lbs/mmcf; PM10: 10.63 lbs/mmcf, and SOx: 0.63 lb/mmcf . During commissioning with water injection- NOx: 100.7 lbs/mmcf, all other factors remain the same. During normal operation- VOC: 3.07 lbs/mmcf, PM10: 10.63 lbs/mmcf, and SOx: 0.63 lbs/mmcf. THIS CONDITION APPLIES DURING THE 1ST 12 MONTHS OF OPERATION ONLY.

Compliance with the NOx and CO emission limits shall be verified through CEMS data. If NOx and CO CEMS data is not available, NOx and CO emissions shall be calculated using fuel usage and the following factors- NOx: 10.07 lb/mmcf and CO: 14.75 lbs/mmcf during normal operations, and NOx: 7.74 lbs/start, 6.53 lbs/shutdown, CO: 8.74 lbs/start, 7.86 lbs/shutdown.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D1]

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A63.5 The operator shall limit emissions from this equipment as follows:

| CONTAMINANT | EMISSIONS LIMIT |
|---|---|
| NOX | Less than 55 LBS IN ANY ONE DAY |

The purpose of this condition is to ensure that the facility emissions are below the CEQA thresholds, and the limit is based on the total emissions from the turbine and the black start generator.

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D1, D6]

A99.1 The 2.5 PPM NOX emission limit(s) shall not apply during commissioning, start-up, shutdown, and an emergency electrical grid system blackout when the turbine is used to re-start another major electric generating station. Commissioning shall not exceed 25 hours total, with no more than 5 hrs uncontrolled and no more than 20 hrs with water injection. Each start-up shall not exceed 15 min. Each shutdown shall not exceed 10 min.

There shall be no more than 60 start ups per year in the first year of operation, and 200 start-ups per year thereafter. NOx emissions for the hour which includes a start shall not exceed 10.52 lbs, and for the hour which includes a shutdown 6.53 lbs.

In the case of a start during an emergency electrical grid system blackout, total NOx shall not exceed 28.23 lbs/hr.

In case of a turbine shutdown which occurs less than 75 minutes from a start up, the emissions calculated for the shutdown shall not include any of the first 15 minutes of the start up, and the emissions calculated for the start up shall not include any of the last 10 minutes of the shutdown.

A shutdown is defined as a reduction in turbine load ending in a period of zero fuel flow. The hour which includes a shutdown is defined as the 60 minutes counted back from the period of zero fuel flow.

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(1)-Modeling, 5-10-1996**; RULE 1303(b)(1)-Modeling, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A99.2 The 6.0 PPM CO emission limit(s) shall not apply during commissioning, start-up, and shutdown periods. Commissioning shall not exceed 25 hours total, with no more than 5 hrs uncontrolled and no more than 20 hrs with water injection. Each start-up shall not exceed 15 min. Each shutdown shall not exceed 10 min. There shall be no more than 60 start ups per year in the first year of operation, and 200 start-ups per year thereafter. CO emissions for the hour which includes a start shall not exceed 8.74 lbs, and for the hour which includes a shutdown 7.86 lb.

In the case of a start during an emergency electrical grid system blackout, total NOx shall not exceed 28.23 lbs/hr.

In case of a turbine shutdown which occurs less than 75 minutes from a start up, the emissions calculated for the shutdown shall not include any of the first 15 minutes of the start up, and the emissions calculated for the start up shall not include any of the last 10 minutes of the shutdown.

A shutdown is defined as a reduction in turbine load ending in a period of zero fuel flow. The hour which includes a shutdown is defined as the 60 minutes counted back from the period of zero fuel flow.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(1)-Modeling, 5-10-1996**; RULE 1303(b)(1)-Modeling, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

A195.1 The 2.5 PPM NOX emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(1)-Modeling, 5-10-1996**; RULE 1303(b)(1)-Modeling, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

A195.2 The 6.0 PPM CO emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(1)-Modeling, 5-10-1996**; RULE 1303(b)(1)-Modeling, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

A195.3 The 2.0 PPM VOC emission limit(s) is averaged over 60 minutes at 15 percent O2, dry.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(1)-Modeling, 5-10-1996**; RULE 1303(b)(1)-Modeling, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

A195.4 The 5 PPMV NH3 emission limit(s) is averaged over over 60 minutes at 15% O2, dry basis.

The operator shall calculate and continuously record the NH3 slip concentration using the following:
NH3 (ppmv) = [a-b*c/1E+06]*1E+06/b, where

a = NH3 injection rate (lbs/hr)/17(lb/lb-mol)

b = dry exhaust gas flow rate (scf/hr)/385.3 scf/lb-mol)

c = change in measured NOx across the SCR (ppmvd at 15% O2)

The operator shall install and maintain a NOx analyzer to measure the SCR inlet NOx ppmv accurate to plus or minus 5 percent calibrated at least once every twelve months. The NOx analyzer shall be installed and operated within 90 days of initial start-up.

The operator shall use the above described method or another alternative method approved by the Executive Officer. The ammonia slip calculation procedures described above shall not be used for compliance determination or emission information without corroborative data using an approved reference method for the determination of ammonia.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C4]

A327.1 For the purpose of determining compliance with District Rule 475, combustion contaminant emissions may exceed the concentration limit or the mass emission limit listed, but not both limits at the same time.

[**RULE 475, 10-8-1976**; RULE 475, 8-7-1978]

[Devices subject to this condition : D1]

### C. Throughput or Operating Parameter Limits

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

C1.1 The operator shall limit the fuel usage to no more than 4.70 MM cubic feet per day.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition.

**[RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

C1.2 The operator shall limit the fuel usage to no more than 513 MM cubic feet per year.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition and the records shall be made available upon AQMD request.

For the purpose of this condition, the yearly fuel use limit shall apply only during the 1st 12 months of operation.

**[RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

C1.3 The operator shall limit the fuel usage to no more than 489 MM cubic feet per year.

The operator shall maintain records in a manner approved by the District to demonstrate compliance with this condition and the records shall be made available upon AQMD request.

For the purpose of this condition, the yearly fuel use limit shall apply after the 1st 12 months of operation. The yearly emission limit shall be defined as a period of twelve (12) consecutive months determined on a rolling basis with a new 12 month period beginning on the first day of each calendar month.

**[RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

C1.4 The operator shall limit the operating time to no more than 90 hour(s) in any one year.

The 90 hours per year limit may include up to 64 hours per year operating time to maintain engine readiness or testing.

[RULE 1110.2, 6-3-2005; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996**; RULE 1401, 3-4-2005]

[Devices subject to this condition : D6]

C157.1 The operator shall install and maintain a pressure relief valve set at 50 psig.

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D11]

## D. Monitoring/Testing Requirements

D12.1 The operator shall install and maintain a(n) flow meter to accurately indicate the fuel usage being supplied to the turbine.

The operator shall also install and maintain a device to continuously record the parameter being measured.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

**[RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D12.2 The operator shall install and maintain a(n) flow meter to accurately indicate the flow rate of the total hourly throughput of injected ammonia.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C4]

D12.3 The operator shall install and maintain a(n) temperature gauge to accurately indicate the temperature in the exhaust at the inlet to the SCR reactor.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C4]

D12.4 The operator shall install and maintain a(n) pressure gauge to accurately indicate the differential pressure across the SCR catalyst bed in inches of water column.

The measuring device or gauge shall be accurate to within plus or minus 5 percent. It shall be calibrated once every 12 months.

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C4]

D12.5 The operator shall install and maintain a(n) non-resettable elapsed time meter to accurately indicate the elapsed operating time of the engine.

[RULE 1110.2, 6-3-2005; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996**; RULE 1401, 3-4-2005]

[Devices subject to this condition : D6]

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D29.1 The operator shall conduct source test(s) for the pollutant(s) identified below.

| Pollutant(s) to be tested | Required Test Method(s) | Averaging Time | Test Location |
|---|---|---|---|
| NOX emissions | District method 100.1 | 1 hour | Outlet of the SCR serving this equipment |
| CO emissions | District method 100.1 | 1 hour | Outlet of the SCR serving this equipment |
| SOX emissions | Approved District method | District-approved averaging time | Fuel Sample |
| VOC | Approved District method | 1 hour | Outlet of the SCR serving this equipment |
| PM10 emissions | Approved District method | District-approved averaging time | Outlet of the SCR serving this equipment |
| NH3 emissions | District method 207.1 and 5.3 or EPA method 17 | 1 hour | Outlet of the SCR serving this equipment |

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at loads of 100, 75, and 50 percent.

For natural gas fired turbines only, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters are done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA Method TO-12 (with pre concentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F.

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines.

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

Because the VOC BACT level was set using data derived from various source test results, this alternate VOC compliance method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits.

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

D29.2 The operator shall conduct source test(s) for the pollutant(s) identified below.

| Pollutant(s) to be tested | Required Test Method(s) | Averaging Time | Test Location |
|---|---|---|---|
| NH3 emissions | District method 207.1 and 5.3 or EPA method 17 | 1 hour | Outlet of the SCR serving this equipment |

The test shall be conducted and the results submitted to the District within 45 days after the test date. The AQMD shall be notified of the date and time of the test at least 7 days prior to the test.

The test(s) shall be conducted at least quarterly during the first twelve months of operation and at least annually thereafter. The NOx concentration, as determined by the CEMS, shall be simultaneously recorded during the ammonia slip test. If the CEMS is inoperable, a test shall be conducted to determine the NOx emissions using District Method 100.1 measured over a 60 minute averaging time period.

The test shall be conducted to demonstrate compliance with the Rule 1303 concentration limit.

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D1]

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D29.3 The operator shall conduct source test(s) for the pollutant(s) identified below.

| Pollutant(s) to be tested | Required Test Method(s) | Averaging Time | Test Location |
|---|---|---|---|
| SOX emissions | Approved District method | District-approved averaging time | Fuel Sample |
| VOC emissions | Approved District method | 1 hour | Outlet of the SCR serving this equipment |
| PM10 emissions | Approved District method | District-approved averaging time | Outlet of the SCR serving this equipment |

The test(s) shall be conducted at least once every three years.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the turbine generating output in MW.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at 100 percent load.

The test shall be conducted for compliance verification of the BACT VOC 2.0 ppmv limit.

For natural gas fired turbines only, VOC compliance shall be demonstrated as follows: a) Stack gas samples are extracted into Summa canisters maintaining a final canister pressure between 400-500 mm Hg absolute, b) Pressurization of canisters are done with zero gas analyzed/certified to contain less than 0.05 ppmv total hydrocarbon as carbon, and c) Analysis of canisters are per EPA Method TO-12 (with pre concentration) and temperature of canisters when extracting samples for analysis is not below 70 deg F.

The use of this alternative method for VOC compliance determination does not mean that it is more accurate than AQMD Method 25.3, nor does it mean that it may be used in lieu of AQMD Method 25.3 without prior approval except for the determination of compliance with the VOC BACT level of 2.0 ppmv calculated as carbon for natural gas fired turbines.

Because the VOC BACT level was set using data derived from various source test results, this alternate VOC compliance method provides a fair comparison and represents the best sampling and analysis technique for this purpose at this time. The test results shall be reported with two significant digits.

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

D29.4 The operator shall conduct source test(s) for the pollutant(s) identified below.

| Pollutant(s) to be tested | Required Test Method(s) | Averaging Time | Test Location |
|---|---|---|---|
| NOX emissions | District method 100.1 | 1 hour | Outlet |
| CO emissions | District method 100.1 | 1 hour | Outlet |
| VOC emissions | Approved District method | 1 hour | Outlet |

The test shall be conducted after AQMD approval of the source test protocol, but no later than 180 days after initial start-up. The AQMD shall be notified of the date and time of the test at least 10 days prior to the test.

The test shall be conducted to determine the oxygen levels in the exhaust. In addition, the tests shall measure the fuel flow rate (CFH), the flue gas flow rate, and the engine output in hp.

The test shall be conducted in accordance with AQMD approved test protocol. The protocol shall be submitted to the AQMD engineer no later than 45 days before the proposed test date and shall be approved by the AQMD before the test commences. The test protocol shall include the proposed operating conditions of the turbine during the tests, the identity of the testing lab, a statement from the testing lab certifying that it meets the criteria of Rule 304, and a description of all sampling and analytical procedures.

The test shall be conducted when this equipment is operating at a load of 100 percent.

The test shall be conducted for compliance verification of the NOx, CO, and VOC BACT limit.

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D6]

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

D82.1 The operator shall install and maintain a CEMS to measure the following parameters:

NOx and CO concentration in ppmv.

Concentrations shall be corrected to 15 percent oxygen on a dry basis. The CEMS shall be installed and operating no later than 90 days after initial startup of the turbine, in accordance with an approved AQMD Rule 218 CEMS plan application. The operator shall not install the CEMS prior to receiving initial approval from AQMD.

The CEMS will convert the actual NOX and CO concentrations to mass emission rates (lbs/hr) and record the hourly emission rates on a continuous basis.

The CEMS shall be installed and operated to measure the NOx and CO concentration over a 15 minute averaging time period. The CEMS shall convert the actual CO concentrations to mass emission rates (lbs/hr) using the equation below and record the hourly emission rates on a continuous basis.

CO Emission Rate, lbs/hr = K*Cco*Fd[20.9/(20.9%-%O2 d)][(Qg*HHV)/10E6], where

K = 7.267*10-8 (lbs/scf)/ppm

Cco = Average of 4 consecutive 15 min. average CO concentrations, ppm

Fd = 8710 dscf/MMBTU natural gas

%O2, d = Hourly average % by volume O2 dry, corresponding to Cco

Qg = Fuel gas usage during the hour, scf/hr

HHV = Gross high heating value of the fuel gas, BTU/scf

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002; **RULE 218, 8-7-1981**; RULE 218, 5-14-1999]

[Devices subject to this condition : D1]

## E. Equipment Operation/Construction Requirements

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

E144.1 The operator shall vent this equipment, during filling, only to the vessel from which it is being filled.

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D11]

E162.1 The operator shall use this equipment only during utility failure periods, except for maintenance purposes.

[RULE 1110.2, 6-3-2005; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996**; RULE 1401, 3-4-2005]

[Devices subject to this condition : D6]

E179.1 For the purpose of the following condition number(s), continuously record shall be defined as recording at least once every hour and shall be calculated based upon the average of the continuous monitoring for that hour.

Condition Number D 12- 2

Condition Number D 12- 3

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C4]

E179.2 For the purpose of the following condition number(s), continuous monitoring shall be defined as measuring at least once every month and shall be calculated based upon the average of the continuous monitoring for that month.

Condition Number D 12- 4

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : C4]

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

E193.1 The operator shall upon completion of construction; operate and maintain this equipment according to the following specifications:

In accordance with all mitigation measures stipulated in the Negative Declaration prepared for this project (CEQA State Clearinghouse No. 2006121113).

[CA PRC CEQA, 11-23-1970]

[Devices subject to this condition : D1, C3, C4, D6, D11]

E193.2 The operator shall operate and maintain this equipment according to the following specifications:

The TA Luft carburetor settings shall be maintained at all times.

**[RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D6]

## H. Applicable Rules

H23.1 This equipment is subject to the applicable requirements of the following rules or regulations:

| Contaminant | Rule | Rule/Subpart |
|---|---|---|
| SOX | 40CFR60, SUBPART | KKKK |
| NOX | 40CFR60, SUBPART | KKKK |

**[40CFR 60 Subpart KKKK, 7-6-2006]**

[Devices subject to this condition : D1]

## K. Record Keeping/Reporting

# FACILITY PERMIT TO OPERATE
# SO CAL EDISON CO

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

K40.1 The operator shall provide to the District a source test report in accordance with the following specifications:

Source test results shall be submitted to the District no later than 60 days after the source test was conducted.

Emission data shall be expressed in terms of (ppmv) corrected to 15 percent oxygen (dry basis). In addition, solid PM emissions, if required to be tested, shall also be reported in terms of grains per DSCF.

All exhaust flow rate shall be expressed in terms of dry standard cubic feet per minute (DSCFM) and dry actual cubic feet per minute (DACFM).

All moisture concentration shall be expressed in terms of percent corrected to 15 percent oxygen.

Source test results shall also include the oxygen levels in the exhaust, fuel flow rate (CFH), the flue gas temperature, and the generator power output (MW) under which the test was conducted.

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002; **RULE 1303(b)(2)-Offset, 5-10-1996**; RULE 1303(b)(2)-Offset, 12-6-2002]

[Devices subject to this condition : D1]

K67.1 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Commissioning hours and type of control and fuel use

Date and time of each start-up and shutdown

Natural gas fuel use after the commissioning period and prior to CEMS certification

CEMS minute data during start up and shutdown

[**RULE 1303(a)(1)-BACT, 5-10-1996**; RULE 1303(a)(1)-BACT, 12-6-2002]

[Devices subject to this condition : D1]

## SECTION H: PERMIT TO CONSTRUCT AND TEMPORARY PERMIT TO OPERATE

The operator shall comply with the terms and conditions set forth below:

K67.2 The operator shall keep records, in a manner approved by the District, for the following parameter(s) or item(s):

Date of operation, the elapsed time, in hours, and the reason for operation. Records shall be kept and maintained on file for a minimum of two years and made available to district personnel upon request.

[RULE 1110.2, 6-3-2005; **RULE 1304(a)-Modeling and Offset Exemption, 6-14-1996**; RULE 1401, 3-4-2005]

[Devices subject to this condition : D6]